tailcall manual page - Tcl Built-In Commands

tcl.tk/man/tcl/TclCmd/tailcall.htm

NAME

tailcall — Replace the current procedure with another command

SYNOPSIS

tailcall *command* ?*arg ...*?

DESCRIPTION

The **tailcall** command replaces the currently executing procedure, lambda application, or method with another command. The *command*, which will have *arg ...* passed as arguments if they are supplied, will be looked up in the current namespace context, not in the caller's. Apart from that difference in resolution, it is equivalent to:

```
return [uplevel 1 [list command ?arg ...?]]
```

This command may not be invoked from within an **uplevel** into a procedure or inside a **catch** inside a procedure or lambda.

EXAMPLE

Compute the factorial of a number.

```
proc factorial {n {accum 1}} {
    if {$n < 2} {
        return $accum
    }
    tailcall factorial [expr {$n - 1}] [expr {$accum * $n}]
}
```

Print the elements of a list with alternating lines having different indentations.

```
proc printList {theList} {
    if {[llength $theList]} {
        puts "> [lindex $theList 0]"
        tailcall printList2 [lrange $theList 1 end]
    }
}
proc printList2 {theList} {
    if {[llength $theList]} {
        puts "< [lindex $theList 0]"
        tailcall printList [lrange $theList 1 end]
    }
}
```